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EXAMINER	
BOUTAH, ALINA A	

ART UNIT	PAPER NUMBER
2143	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/875,543	AVIANI ET AL.	
	Examiner	Art Unit	
	Alina N. Boutah	2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 October 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-50* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-50* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

This action is in response to Applicant's amendment filed October 26, 2005. Claims 44-50 have been newly added. Claims 1-50 are now pending in the application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brendel et al. (U.S. Patent Number 5,774,660), hereinafter referred to as Brendel, in view of Ilnicki et al. (U.S. Patent Number 6,751,677), hereinafter referred to as Ilnicki.

Regarding claim 1, Brendel disclosed a method in a data communication device (load balancer) for providing access to data from a data access device server) to a client over a network (Figure 6), the method comprising the steps of: receiving a first request from a client to access data (Figure 6, Figure 11A sign 100); providing a second request to access data to the data access device in response to receiving the first request, the second request including connection establishment information that enables establishment of a communication connection between the data access device and the client (Figure 6, Figure 11A signs 102, 120), receiving a first

response from the data access device (Figure 6, Figure 11A signs 102, 120); and providing connection information to the data access device in response to the receiving the first response, the connection information allows the data access device to establish the communication connection to the client based on the connection establishment information and provide a second response to the second request to the client (Figure 6, Figure 1A sign 104, column 9, lines 18-26, column 9 lines 52-64).

Brendel taught the invention substantially as claimed. However, Brendel did not expressly teach a step of providing a data transfer approval to the data access device in response to receiving the first response, the data transfer approval authorizing the data access device to establish the communication connection to the client based on the connection establishment information.

Brendel suggested exploration of art and/or provided a reason to modify the method for providing data access with additional features such as providing a data transfer approval security feature (column 20 lines 11-16, column 21 lines 11-18).

Ilnicki disclosed a method of providing a data transfer approval to the data access device in response to receiving the first response, the data transfer approval authorizing the data access device to establish the communication connection to the client based on the connection establishment information (Title, Abstract, Figure 5,column 3 lines 43-48, column 4 lines 3-7, lines 21-30, column 5 lines 44-56).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the method of Brendel with the teachings of Ilnicki to include providing a data transfer approval security feature in order to offer a secure connection through a.private

networks behind a corporate firewall (Brendel, column 20, Lines 17-26) since security measures are used in data access network system to control external access (Ilnicki, column 6 Lines 25-33).

Regarding claim 2, Brendel disclosed a method wherein the step of receiving the first request includes (i) receiving the first request based on a request/response communications protocol (Figure 6, Figure 11A), and (ii) receiving a content identifier that identifies a requested content', and the step of providing the second request includes providing the content identifier to enable the data access device to access the requested content (column 6 Line 63-coIumn 7 Line 13).

Regarding claim 3, Brendel and Ilnicki combined disclose a method wherein the step of receiving the first request comprises receiving a plurality of first requests to access data from the client, the step of providing the second request comprises providing a plurality of second requests in response to receiving the first requests, each second request including a request sequence number (Brendel, Figure 6, Figure 11A, column 10 lines 29-37, column 12 lines 7-24); and the step of providing the data transfer approval comprises providing a data transfer approval for each of a plurality of responses to the second requests in a sequence based on the request sequence numbers for the second requests (Brendel, Figure 6, Figure 11A, column 10, lines 29-37, column 12 lines 7-24., Ilnicki, Figure 5, column 3 lines 43-48, column 4 lines 3-7, lines 21-30, column 5 lines 44-56).

Regarding claim 4, Brendel and Ilnicki combined disclose a method wherein the step of providing the second request comprises providing a plurality of second requests to a plurality of data access devices (Brendel, Figure 6, Figure 11A, column 10 lines 29-37); the step of receiving the first response comprises receiving a plurality of first responses from a subset of the plurality of data access devices that received the second requests (Brendel, Figure 11A, column 12 lines 7-24); and the step of providing the data transfer approval comprises a step of selecting one of the subset of data access devices' to provide the second response to the second request and providing the data transfer approval to the selected one of the data access devices (Brendel, Figure 6, Figure 11A, column 10 lines 29-37, Ilnicki, Figure 5, column 3 lines 43-48, column 4 lines 3-7, lines 21-30, column 5 lines 44-56).

Regarding claim 5, Brendel disclosed a method wherein each first response includes usage information for each data access device in the subset that indicates a level of usage for each data access device in the subset (Figure 6, column 6 lines 20-33, column 9 lines 30-40); and the step of selecting one of the subset comprises comparing the usage information for all of the data access devices in the subset to determine the selected one of the data access devices from the subset having a preferable level of usage (column 9 lines 30-40, column 11 lines 51-63).

Regarding claim 6, Brendel disclosed a method wherein the connection establishment information includes a current transmit window for the client that provides a window length for transmitting the second response to the client from the data access device, the window length

provided by the client in the first request for use by the data access device when determining a quantity of data to provide in the second response (column 10 lines 20-37).

Regarding claim 7, Brendel disclosed a method wherein the data access device is a first data access device, and the connection establishment information includes a location identifier for a second data access device suitable for use if a requested content specified in the first request is unavailable from the first data access device (Figure 6, column 9 lines 18-40; col. 18, lines 55-67).

Regarding claim 8, Brendel and Ilnicki combined disclose a method wherein the connection establishment information is a first set of connection establishment information, and the data transfer approval includes a second set of connection establishment information, the data transfer approval authorizing the data access device to establish the communication connection to the client based on the first set and the second set of connection establishment information (Brendel, Figure 6, Figure 11A, column 10 lines 29-37; Ilnicki, Figure 5, column 3 lines 43-48, column 4 lines 3-7, lines 21-30, column 5 lines 44-56).

Regarding claim 9, Brendel disclosed a method, further comprising the steps of: receiving a first acknowledgment from the client of the second response provided to the client from the data access device over the communication connection (Figure 11A); and in response to receiving the first acknowledgment, forwarding a second acknowledgment to the data access

device indicating that the data communications device received the first acknowledgment from the client (Figure 11A, column 12 lines 7-29).

Regarding claim 10, Brendel disclosed a method further comprising the steps of receiving a first termination signal from the data access device .in order to terminate a request session with the client', and in response to receiving the first termination signal, providing a second termination signal to the client that indicates a request to terminate the request session (Figures 1 1A-11B, column 12 line 59-coIumn 13 lines 4).

Regarding claims 11-20, the data communication device corresponds directly to the method of claims 1-10, and thus these claims are rejected using the same rationale.

Regarding claims 21, the computer program product corresponds directly to the method of claim 1 and the data communication device of claim 11, and thus is rejected using the same rationale.

Regarding claims 22, the data communication device corresponds directly to the method of claim 1, the data communication device of claim 11, and the computer program product of claim 21, and thus is rejected using the same rationale.

Regarding claim 23, Brendel and Ilnicki combined disclose a method in a data access device (server) for providing data over a network to a client (Brendel, Figure 6; Ilnicki, Figure

5), the method comprising the steps of: receiving a second request to access data from a data communication device, the second request based on a first request to access data received by the data communications device from the client and the second request including connection establishment information that enables establishment of a communications connection between the data access device and the client (Brendel, Figure 6, Figure 1 IA signs 102, 120); providing a first response to the data communications device (Brendel, Figure 6, Figure 11A signs 102, 120), and receiving a data transfer approval from the data communications device in response to providing the first response, the data transfer approval authorizing the data access device to establish the communication connection to the client and to provide a second response to the second request to the client based on the connection establishment information (Brendel, Figure .6, Figure 1 IA sign 104, column 9 lines 18-26, column 9 lines 52-64, Ilnicki, Title, Abstract, figure 5, column 3 lines 43-48, column 4 lines 3-7, lines 21-30, column 5 lines 44-56).

Regarding claim 24, Brendel disclosed a method wherein the step of receiving the second request includes receiving a content identifier that identifies a requested content and that enables the data access device to access the requested content (column 6 line 63-coIumn 7 line 13).

Regarding claim 25, Brendel disclosed a method wherein the connection establishment information includes a current transmit window for the client that provides a window length for transmitting the second response to the client, the window length provided by the client in the first request for use by the data access device when determining a quantity of data to provide in the second response (column 10 lines 20-37).

Regarding claim 26, Brendel disclosed a method wherein the data access device is a first data access device, and the connection establishment information includes a location identifier for a second data access device suitable for use if a requested content specified in the first request is unavailable from the first data access device (Figure 6, column 9 lines 18-40).

Regarding claim 27, Brendel and Ilnicki combined disclose a method wherein the connection establishment information is a first set of connection establishment information, and the data transfer approval includes a second set of connection establishment information, the data transfer approval authorizing the data access device to establish the communication connection to the client based on the first set and the second set of connection establishment information (Brendel, Figure 6, Figure 11A, column 10 lines 29-37; Ilnicki, Figure 5, column 3 lines 43-48, column 4 lines 3-7, lines 21-30, column 5 lines 44-56).

Regarding claim 28, Brendel disclosed a method further comprising the steps of establishing the communication connection to the client and providing the second response to the second request to the client over the communication connection (Figure 6, Figure 1 IA sign 104, column 9 lines 18-26, column 9 lines 52-64).

Regarding claims 29-34, the data access device corresponds directly to the method of claims 23-28, and thus these claims are rejected using the same rationale.

Regarding claims 35, the computer program product corresponds directly to the method of claim 23 and the data access device of claim 29, and thus is rejected using the same rationale.

Regarding claims 36, the data access device corresponds directly to the method of claim 23, the data access device of claim 29, and the computer program product of claim 35, and thus is rejected using the same rationale.

Regarding claim 37, Brendel and Ilnicki combined disclose a method wherein the data communication device is a switch and wherein providing the data transfer approval to the data access device results in the data access device establishing the communication connection with the client to service the first request, the communication connection being a path other than through the data communication device (Brendel, Figure 6, Figure 1 IA, column 10 lines 29-37, column 20 lines 1 1-16., Ilnicki, Figure 5, column 4 lines 3-7, lines 21-30, column 5 lines 44-56).

Regarding claim 38, Brendel disclosed a method wherein providing the second request includes originating the connection establishment information to include an address of the client, the address being used by the data access device to establish the communication connection directly with the client to provide requested content from the data access device to the client, alleviating the data communication device from having to facilitate a transfer of data from the data access device to the client to service the first request (Figure 6, Figure 11A sign 104, column 9 lines 18-26, column 9 lines 52-64).

Regarding claim 39, Brendel disclosed a method wherein the first request is one of multiple requests by the client to the data communication device, the method further comprising: providing a sequence number associated with the second request to enable the data access device to reply to the second request according to an order associated with when the second request was made relative to the multiple requests to the data communication device so that the client does not need to wait for fulfillment of a previous request before sending of the first request (Figure 6, Figure 11A, column 10 lines 29-37, column 12 lines 7-24).

Regarding claim 40, Brendel disclosed a method further comprising: performing a bidding process with multiple data access devices, receiving responses from the multiple data access devices including load information and estimates of a cost of servicing the first request, and based on the load information, selecting the data access device of multiple data access devices to service the first request by sending the second request to the data access device (Figure 6, Figure 1 IA, column 9 lines 30-40, column 11 lines 51-63, column 12 lines 25-37).

Regarding claim 41, Brendel and Ilnicki combined disclose a method wherein the data communication device is a switch and wherein receiving the data transfer approval results in the data access device establishing the communication connection with the client to service the first request, the communication connection from the data access device to the client being a path other than through the data communication device (Brendel, Figure 6, Figure 1.1A, column 10 lines 29-37, column 20 lines 11-16; Ilnicki, Figure 5, column 4 lines 3-7, lines 21-30, column 5 lines 44-56).

Regarding claim 42, Brendel disclosed a method wherein receiving the second request includes receiving an address of the client, the address being used by the data access device to establish the communication connection directly with the client to provide requested content from the data access device to the client, alleviating the data communication device from having to facilitate a transfer of data from the data access device to the client to service the first request (Figure 6, Figure 1 IA, column 10 lines 29-37, column 20 lines 1 1-16).

Regarding claim 43, Brendel disclosed a method wherein the first request is one of multiple requests by the client to the data communication device, the method further comprising: receiving a sequence number associated with the second request to enable the data access device to reply to the second request according to an order associated with when the second request was made relative to the multiple requests to the data communication device so that the client does not need to wait for fulfillment of a previous request before sending of the first request Figure 6, Figure 11A, column 10 lines 29-37, column 12 lines 7-24.

(New) Regarding claim 44, Brendel teaches a method as in claim 43, wherein receiving the first response from the data access device includes receiving an indication from the data access device that the data access devices has access to the data an can forward the data to the client (figure 11A).

(New) Regarding claim 45. Brendel teaches the data communication device of claim 13, wherein a respective sequence number for each of the second requests distinguishes the second

requests amongst each other such that a first one of the second requests has a corresponding assigned unique sequence number with respect to a corresponding assigned sequence number assigned to a second one of the second requests (col. 10, lines 30-34).

(New) Regarding claim 46, Brendel teaches the data communications device of claim 15, wherein the plurality of second requests are forwarded to the plurality of data access devices in response to receiving a single first request from the client such that the data communication device learns, based on receiving the first responses, which of the data communications devices are most able to service the first request by forwarding data to the client (figure 10).

(New) Regarding claim 47, Brendel teaches the data communication device as in claim 11, wherein the data communication device is a switch and wherein receiving the data transfer approval results in the data access device establishing the communication connection with the client to service the first request, the communication connection from the data access device to the client being a path other than through the data communication device; and wherein the connection establishment information in the second request includes a request for content generated by the client, the data access device receiving the request for content prior to establishing a connection between the data access device and the client based on the connection establishment information Brendel, Figure 6, Figure 1.1A, column 10 lines 29-37, column 20 lines 11-16).

(New) Regarding claim 48, Brendel teaches the data communication device as in claim 47, wherein the client generates multiple first requests for corresponding different content, the multiple first requests being forwarded from the client to the data communication device, the data communication device generating respective second requests associated with each of the multiple first requests, the data communication device forwarding the respective second requests to two or more data access devices that are able to establish a respective connection and serve requested data, each of the second requests sent from the data communication device to a respective data access device including a request sequence number distinguishing each of the second requests from each other (Brendel, Figure 6, Figure 1.1A, column 10 lines 29-37, column 20 lines 11-16).

(New) Regarding claim 49, Brendel teaches the data communication device as in claim 48, wherein if the client makes several pipelined first request to the data communication device, the data communication device then uses the request sequence numbers to determine when and to which data access device to send respective second requests so that the client can receive a respective response from the data access device in an order corresponding to an order of the first requests forwarded from the client to the data communication device (Brendel, Figure 6, Figure 1.1A, column 10 lines 29-37, column 20 lines 11-16).

(New) Regarding claim 50, Brendel-Ilnicki teaches the data communications device of claim 11, wherein the connection establishment information includes a current transmit window for the client that provides a window length for transmitting the second response to the client

from the data access device, the window length provided by the client in the first request fro use by the data access device when determining a quantity of data to provide in the second response; wherein the data access device is a first data access device, and the connection establishment information included a location identifier for a second access device suitable for use if a requested content specified in the first request is unavailable from the first data access device; wherein the connection establishment information is a first set of connection establishment information, and the data transfer approval includes a second set of connection establishment information, the data transfer approval authorizing the data access device to establish the communication connection to the client based on the first set and the second set of connection establishment information; and wherein the logic instructions for the data communication manager application comprise further logic instructions that, when performed on the processor, cause the data communication manager to perform the operations of: receiving a first acknowledgement through the communications interface from the client of the second response provided to the client from the data access device over the communication connection; and in response to receiving the first acknowledgment, forwarding a second acknowledgment through the communications interface to the data access device indicating that the data communications device received the first acknowledgment from the client; wherein the logic instructions for the data communication manager application comprise further logic instructions that, when performed on the processor, cause the data communication manager to perform the operations of: receiving a plurality of first requests to access data from the client; providing a plurality of second requests in response to receiving the first requests, each second request including a request Sequence number; and providing a data transfer approval for each of a plurality of

responses to the second requests in a sequence based on the request sequence numbers for the second requests (Brendel, Figure 6, Figure 1.1A, column 10 lines 29-37, column 20 lines 11-16; Ilnicki, Figure 5, column 4 lines 3-7, lines 21-30, column 5 lines 44-56)..

Response to Arguments

Applicant's arguments filed October 26, 2006 have been fully considered but they are not persuasive.

In response to Applicant's argument with regards to claim 1, that Ilnicki fails to teach or disclose "providing a data transfer approval to the data access device in response to receiving the first response, the data transfer approval authorizing the data access device to establish the communication connection to the client based on the connection establishment information" the PTO respectfully submits that this is being taught in figure 5 of Ilnicki. Figure 5 illustrates a secure SSL connection between a user terminal (client) and a target server. Here, the user terminal sends a request to a gateway. The gateway authenticates the client, which later allows the client to connect to the target server. In this case, the authentication is interpreted as providing a data transfer approval as claimed by application's invention.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5

USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

Regarding claim 3, Applicant argues that the combined references fail to indicate whatsoever that each request includes a request sequence number to distinguish it from other requests. The PTO respectfully submits that the use of sequence numbers is clearly disclosed in Brendel in col. 10, lines 31-32 which states that "a sequence number is also included in the TCP/IP header to keep track of packets received."

Regarding claim 4, Applicant argues that the cited references fail to teach that multiple second requests for a single first request are sent to multiple data access devices and thereafter receiving responses from the multiple data access devices, the PTO respectfully submits that this is being taught in the Brendel as mentioned above in figure 6.

Regarding claim 6, although Brendel does not explicitly teach a current transmit window, a window length, or quantity of data being sent as claimed, although he discloses a frame checksum as well as IP header that may be appended to the data being transmitted (col. 10, line 25-26). One of ordinary skill in the art would recognize that when transmitting a packet, information such as a window size, length, quantity, etc. must be included in the header of the packet. This feature is well known in the art of networking.

Regarding claim 7, figure 4 as well as col. 18, lines 55-67 of Brendel disclose a backup server that serves the clients if the respective server fails.

Regarding claim 9, figure 11A of Brendel illustrates that the load balancer sends the server an acknowledgement that that client receives a message from the server.

Regarding claims 39 and 43, col. 10, lines 30-34 of Brendel teaches utilizing a sequence number for facilitating servicing of multiple requests from the client to the data communication device.

Regarding claim 40, Brendel teaches the load balancer determining which server is best suited to serve a request. Although he does not explicitly teach a bidding process as claimed, the Examiner takes official notice that this feature is well known in the art of networking.

The rejections of claims 23, 29, 35 and 36 are analogous to claim 1, therefore are sustained for the same reason provided above.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alina N. Boutah whose telephone number is 571-272-3908. The examiner can normally be reached on Monday-Friday (9:00 am - 5:00 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on 571-272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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SUPERVISORY PATENT EXAMINER